

2010 MEETING OF VOORBURG GROUP

**Revisited Sector Paper on
Warehousing and Storage Services**

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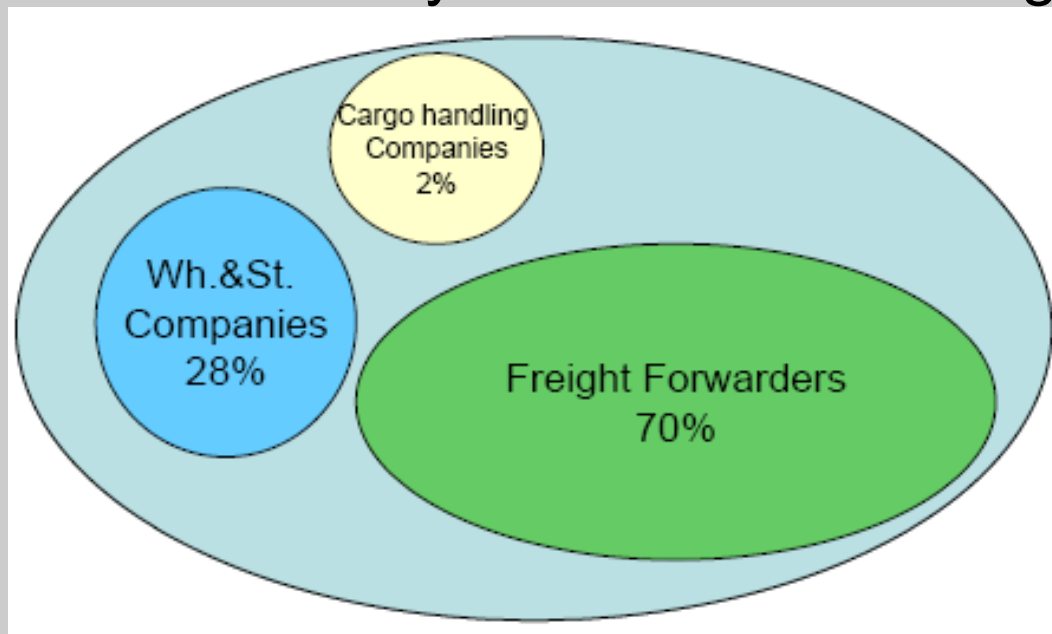
Sources for the revisited sector paper

- Survey of NSI's (19 answers)
- Paper from previous years:
 - Lucier (2004), USA: SPPI methodology (for refrigerated warehousing and storage services only)
 - Parbhu (2004), New Zealand: SPPI methodology (for warehousing & storage and for cargo handling)
- No paper on turnover collection for this sector so far

Classification (1)

Warehousing and storage as secondary activity

- Warehousing & storage service are classified as transport support activities.
- Often secondary activities of other logistics companies:

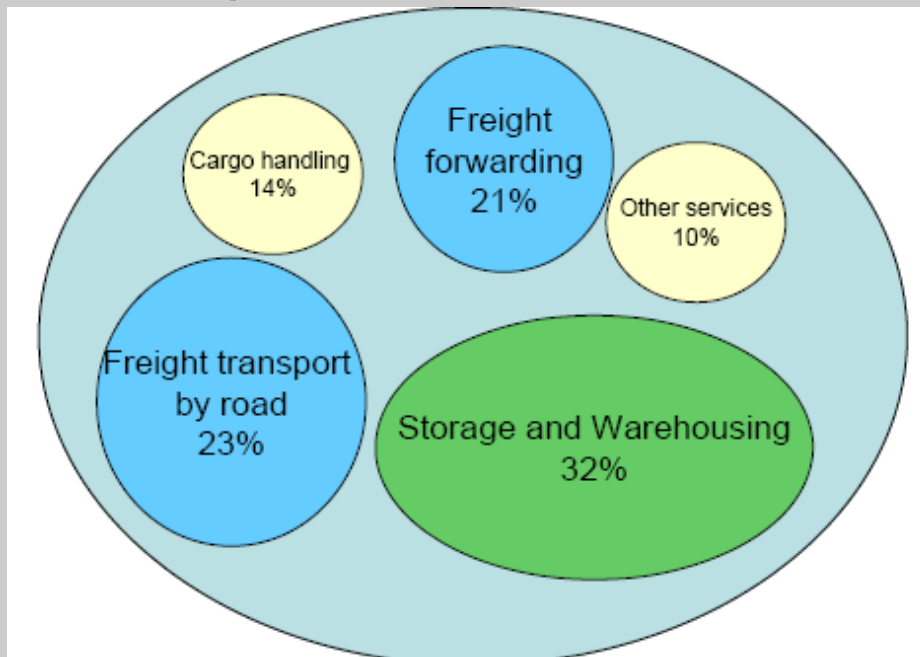


Industry of origin of companies offering „w&s“ as a product (German survey for development of weighting scheme, 2004)

Classification (2)

Warehousing and storage as secondary activity

- W&s companies offer other logistics services as well
=> classification does not take account of integrated logistics service providers



Service products offered by „w&s“ companies (German survey for development of weighting scheme, 2004)

Classification (3)

Industry classification (ISIC, NACE, NAICS, ANZSIC)

- Very rough or no details given for warehousing and storage
- Differentiation of classifications only by level of detail

NAICS

ANZSIC

Classification (3)

Product classification (CPC, CPA, NAPCS)

- CPC/CPA less detailed, different service products according to service or commodity
 - E.g. Refrigerated storage services, bulk liquid or gas storage services, grain storage services, other storage and warehousing services
- NAPCS very detailed, includes secondary services (e.g. transportation of goods by road)
 - And: „Related Products“ => Services auxiliary to storage and an important activity for storage companies
 - Examples: Handling services, packing, packaging and labeling, „transformation and enhancement services for goods“ (e.g. blast freezing)

Turnover statistics (1)

The main challenge – secondary activities

- Implications for industry-based (SBS, STS) and product-based (service product turnover) turnover measurements:
 - SBS/STS: Many secondary activities of the „w&s“ companies included – development of „pure storage services may be disguised
 - Service product turnover: w&s as secondary activity of other sectors must be included (main sector identified in the survey: ISIC 5229 „other transportation support activities“ – freight forwarders(!), ISIC 4923 „freight transport by road“)

=> Industry turnover and product turnover do not align at all in this sector

Turnover statistics (3)

Options for development (1)

Category	Data Source	Level of Detail Collected	Frequency	Cost	Comments
Best	Survey/Census	Industry turnover <u>and</u> product turnover detail;	Sub-annual collection (monthly or quarterly)	<ul style="list-style-type: none"> - Most expensive - Largest response burden 	<ul style="list-style-type: none"> - Allows greatest flexibility to identify specific revenue streams, residential and non-residential allocations can be collected directly. - Timely data
Good	Survey/Census	Industry detail <u>only</u>	Sub-annual	<ul style="list-style-type: none"> - Expensive - High response burden 	<ul style="list-style-type: none"> - Industry detail may not be sufficient to delineate sources of revenue or important residential/non-residential components using ISIC. - Timely data

Turnover statistics (3)

Options for development (2)

Good	Combination of census (large companies) and administrative data	Industry detail <u>only</u>	Sub-annual	<ul style="list-style-type: none"> - Less expensive - low response burden 	<ul style="list-style-type: none"> - Industry detail may not be sufficient. - Timeliness questioned - Different definitions for turnover in administrative data files may cause (justifiable) bias
Minimum	Administrative (tax data, industry association data etc.,)	Industry detail <u>only</u>	Annual	<ul style="list-style-type: none"> - Least expensive - Little or no respondent burden 	<ul style="list-style-type: none"> - Income and production definitions can differ adding imprecision to estimates using tax data in place of actual revenue received for services - Least timely

Turnover statistics (4)

More challenges

- Checking the sector assignments of companies. Methods:
 - Survey/Census: asking for main activity
 - Cross-checking with other statistics and business register
 - Company profiling, asking experts, checking of annual reports
 - Combining information of different registers
- Administrative data was not designed to meet requirements for turnover statistics and may need adjustment

SPPI (1)

Survey results – State of development

- Good coverage: 13 out of 19 countries calculate and publish SPPI for w&s; 1: calculating, but not publishing; 2 under development
- Sampling methods used:
 - PPS (often with total stratum for large companies and cut-off threshold for small ones)
 - Purposive/judgmental sampling (especially small countries)
- Industry-based or product-based SPPI:
 - 3 NSI's: industry-based including secondary activities ✓
 - 6 NSI's: product-based including w&s services from other sectors ✓
 - 6 NSI's: narrow focus on w&s companies with w&s products 💣
 - Hungary: product-based and industry-based indices calculated (same price quotations, different weighting schemes) 😊 **please publish!**

SPPI (2)

Characteristics of the sector

- Bundling is inherent to the industry (with secondary activities also)
- Special contracts for each customer: custom-tailored solutions, delivered over a longer period of time
- “The challenge in pricing this industry is to incorporate all the services that take place into the pricing methodology.” (Lucier, USA, 2004) Some Services:
 - Labelling and stenciling
 - Inspection
 - Freight consolidation
 - Weighting
 - Picking
 - Wrapping...

SPPI (3)

Pricing methods – options for developing SPPI statistics

Category	Pricing method	Data type in the survey	Quality and Accuracy	Cost
Best	Contract Pricing	Data is based on real transaction prices	Detailed service specifications allow time-consistent comparisons.	<ul style="list-style-type: none"> - Most expensive, with high response burden. - Quality adjustment crucial for correct price measurement when contract expires.
Good	Direct use of prices of repeated services/model pricing	Data is based on list and tariff prices offered, collected by survey; there may be expert estimates as well.	Good representation of pricing and services offered by warehousing and storage companies. Movements in price reflect those in the industry fairly accurately. Models should be reviewed from time to time to assure that they are not outdated.	<ul style="list-style-type: none"> - Less need for respondent assistance than for contract pricing, therefore less expensive. - No quality adjustment necessary (as long as description does not change). - When expert estimates are necessary, response burden may be higher than for contract pricing

SPPI (4)

Pricing methods – options for developing SPPI statistics

Minimum	Average unit price	Total revenue and operating parameters like days of storage, m ² , TEU, tonnes, or pallets stored are taken from respondents in order to estimate revenue per unit of output as a proxy for price.	<p>Transactions in a group must be sufficiently homogeneous (i.e. quality of individual services is unchanged and their quantities in the transactions do not vary). Otherwise, changes can be highly volatile and non-comparable.</p> <p>Revenues have to be well-defined for consistency in comparison.</p> <p>Pricing mechanism must fit to allow unit value pricing.</p>	<ul style="list-style-type: none"> - Less expensive, and least response burden. - Quality adjustment problematic; statisticians have to keep a close look on the figures. - Development of questionnaires requires intense and careful research.
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SPPI (5)

Other considerations (1): Main challenges and possible solutions

Bundling	<ul style="list-style-type: none">- Putting bundled service into the category of the main service- Create an own category for frequently delivered service bundles
Subsidiaries to industrial companies	Well-designed pre-survey will help to sort out this kind of establishments
Communication	Keeping close contact with industry and respondents necessary: information about latest developments; keeping response rate up

SPPI (6)

Other considerations (2): Weighting

Different practices among the countries surveyed.

- Derivation of weights:
 - Own pre-survey for SPPI
 - Use of results from structural business statistics
 - Use of Input-output-tables
- Use of weights:
 - Aggregation of elementary indices of service products
 - Aggregation of company level indices
 - Weights for each single price relative
 - Unweighted index

=> May reflect different national settings (e.g. for small countries)

Summary and further suggestions

- High importance of secondary activities and services auxiliary to warehousing storage are main sector characteristics
- Classification: Similar structures, but different level of details. Breakdown on low should reflect national particularities
- Turnover: especially for w&s, product-based and industry-based turnover will not align
- SPPI: contract pricing seems most appropriate, unit value causes problems.
- Different weighting practices show possible task for Voorburg Group in the future

Questions ?!



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